

E. Richard Hughes, D.D.S.

Docket No. FDA-2012-N-0677

Blade Form Endosseous Dental Implants

E. Richard Hughes, D.D.S.

46440 Benedict Dr.,# 201
Sterling, Va. 20164 USA
703-444-1152
erhughesdds@aol.com

Diplomate, American Board of Oral
Implantology/Implant Dentistry

Fellow, American Academy of Implant
Dentistry

Fellow, American Academy of Implant
Prosthodontics

OSSEOINTEGRATION OF BLADE FORM: LINKOW

Fig. 31. Shows fixation of the implant/bone sample with 10% buffered formalin, decalcification of the fragment with EDTA and inclusion of paraffin.

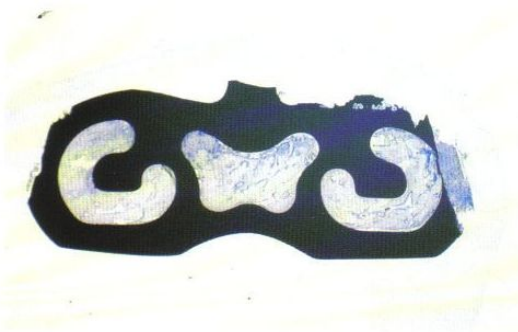


Fig. 32. The metal (black) of the bladevent cut so thin with the microtome that it still remains on the section with a direct bony interface (blue).

Fig. 33.



Figs. 33-34. A higher magnification showing direct bone/metal interface inside the vents of the nine year and seven month old functioning bladevent implant. (Tourmaline Blue Stain)

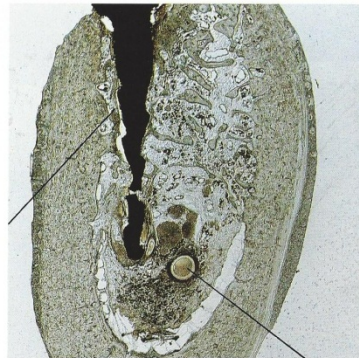
OSSEOINTEGRATION OF BLADE FORM: GROSS AND MICROSCOPIC

COMPATIBILITY OF THE TITANIUM BLADE IMPLANT / 341

Fig. 131. Shows the bone block with the bone closely adapted to the blade.

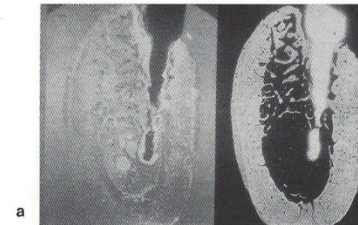


Fig. 132. A micro-radiograph reveals a thin plate of bone surrounding both interfaces of the blade from its shoulder which is very similar in nature as that seen in the buccal/lingual cortices. Note the blade was inserted lingual to the canal which is seen slightly to the apex of the bone.

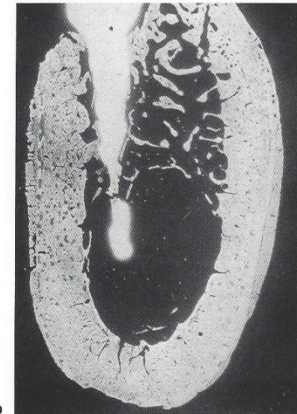


dense plate
of bone

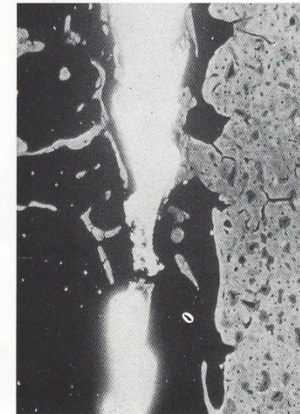
mandibular
canal



a



b

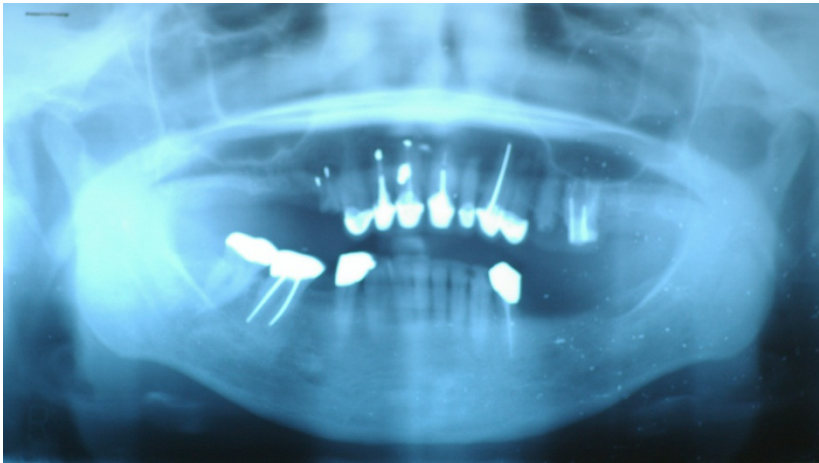


c

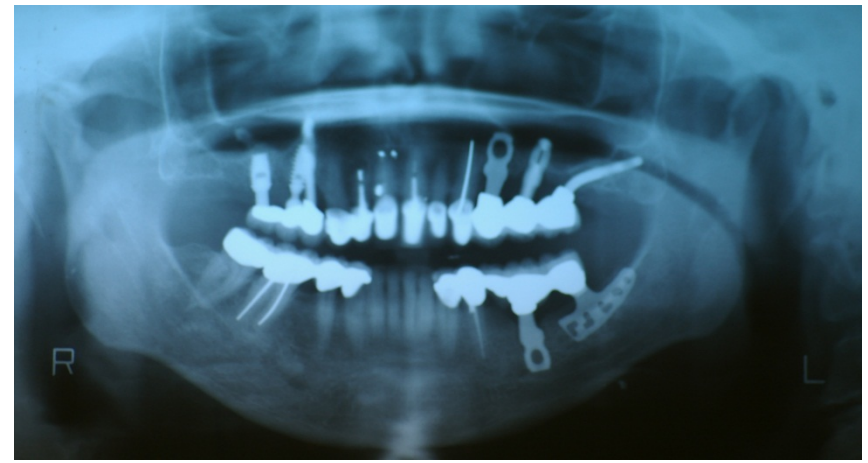
Fig. 133 a, b, c. Various histological sections also revealed that the bone directly opposing the blade-vent's interfaces is not at all similar to the medullary bone but rather similar to the cortical bone.

Case #1 {b6}

Pre



Post



{b6} was treated with the following implants: site of #3 and #4 with 5x8 Bicon root forms, site of #5 with a STR blade form implant, site of # 12, #13 with STR blade form implants, site #14 with a preangled STR blade form (designed to use in lieu of sinus lift procedure), site of # 18 with an Ultimatics L152 blade form implant and the site of # 19 with a STR blade form implant (note the implant appears to be in the inferior alveolar nerve canal, but is lingual or medial to said structure). The STR implants are from Pacific Implant Inc. If a mandibular left lateral onlay bone grafting and maxillary left sinus graft were used, the additional treatment time would be 8 months and an additional cost of \$ 8,200.00. A the crown and bridge is with cemented porcelain fused to semiprecious metal crowns and bridges. The Bicon Dental implants were restored with a two stage protocol. All the blade form implants, except the Ultimatics were restored with a one stage protocol.

All implants osseointegrated and the case has been in service for 8 years.

Case #2 {b6}

Pre



Post



This patient was restored with a preangled STR blade implant, four unit porcelain fused to semiprecious metal fixed partial denture, cemented with copings. Implant at site of # 15 and abutted to teeth # 12 and # 13. Note the preoperative panoramic radiograph, the Bicon Implant in the left maxillary sinus. Note the sleeping Core-Vent root form dental implant at site of # 18. The Core-Vent implant fractured at the platform and was put to sleep. This case functioned for 6 years prior to the patient's death. Using the preangled STR blade implant negates the need for a sinus lift procedure which would of added 14 months on the treatment time and an additional cost of \$ 3,200.00 to the patient.

The STR Blade was placed using a single stage protocol and osseointegrated.

Case #3 {b6}

Pre

Post

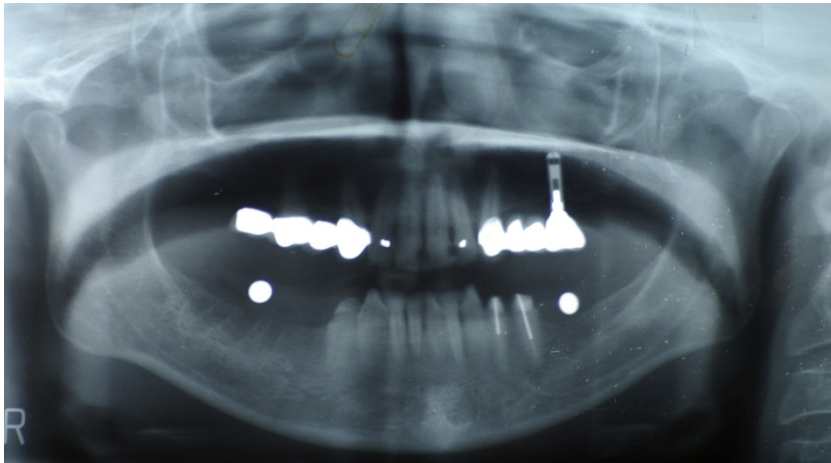


{b6}received two Park Dental Research RA 10 implants. The remaining natural teeth received gold copings. The patient was restored with a cemented 14 unit porcelain fused to semiprecious metal fixed partial denture from # 18 to # 31. This case has been in service for 10 years. The poster mandible is deficient in height and width. Lateral onlay bone grafting would of added 8 months to treatment with an additional \$ 10,000.00 to the cost of treatment.

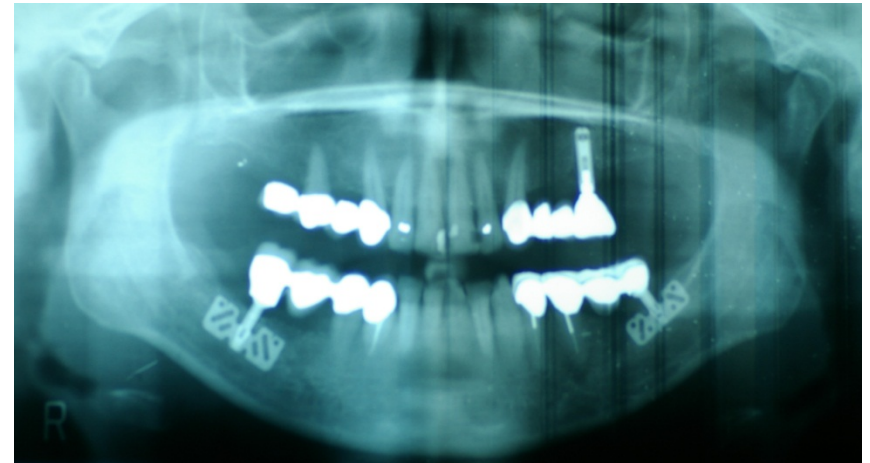
These blades were placed using a single stage protocol and osseointegrated.

Case #4 {b6}

Pre



Post

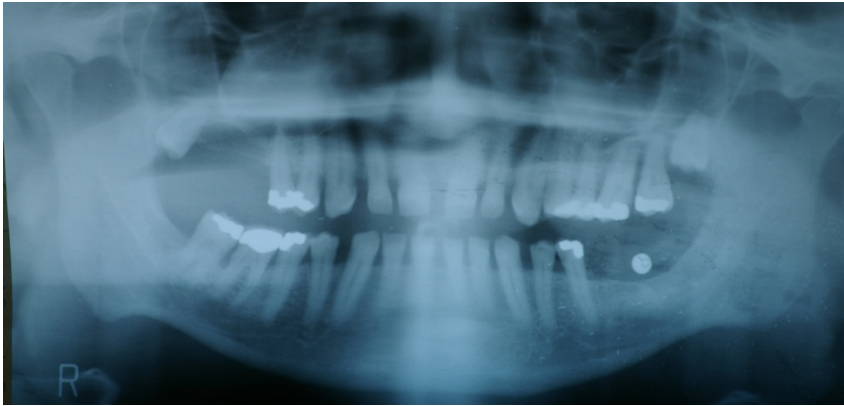


{b6} received a Star A blade form dental implant in the site of tooth # 31 and a Star 01 blade form dental implant at the site of tooth # 18. These implants are from Parc Dental Research. Both sides were restored with cemented porcelain fused to semiprecious metal four unit fixed partial dentures with gold copings on the natural tooth abutments. This patient's posterior mandible is bilaterally deficient in width. This case has been in function for 14 years prior to moving out of the area. A two stage protocol was used and the implants osseointegrated. If onlay bone grafting and root forms were used, the treatment time would have been 8 months with an additional fee of \$10,000.00. {b6} was restored in five months.

Case #5 {b6}

Pre

Post

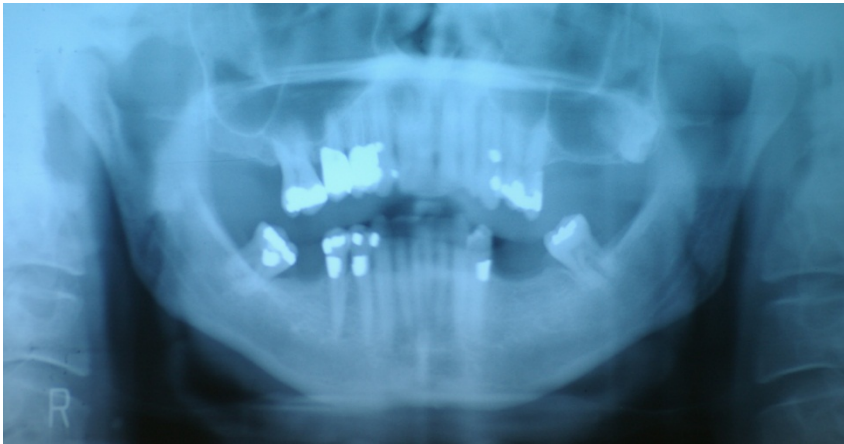


{b6}I received an Ultimatics L-153 single posted implant, replacing tooth # 18. {b6} was restored with a cemented four unit porcelain fused to semiprecious metal fixed partial denture from # 18 to # 21, with copings on teeth # 20 and # 21. The area receiving the blade implant is deficient in height and width. This case was in function for 9 years prior to {b6} death. The implant was placed using a two stage protocol and did osseointegrate. Lateral onlay bone grafting would of added an additional 8 months and \$ 10,000.00 to the cost of treatment.

Case #6 {b6}

Pre

Post



{b6} received a Star 01 blade form implant that was placed using a two stage protocol at the site of # 31 and did osseointegrate. {b6} was restored with a cemented 4 unit porcelain fused to semiprecious metal fixed partial denture with copings on the natural tooth abutments. The left posterior mandible is deficient in width. Bone grafting would add an additional 8 months and \$ 5,000.00 to the treatment.

This case has been in service for 17 years.

Case #7 {b6}

Pre

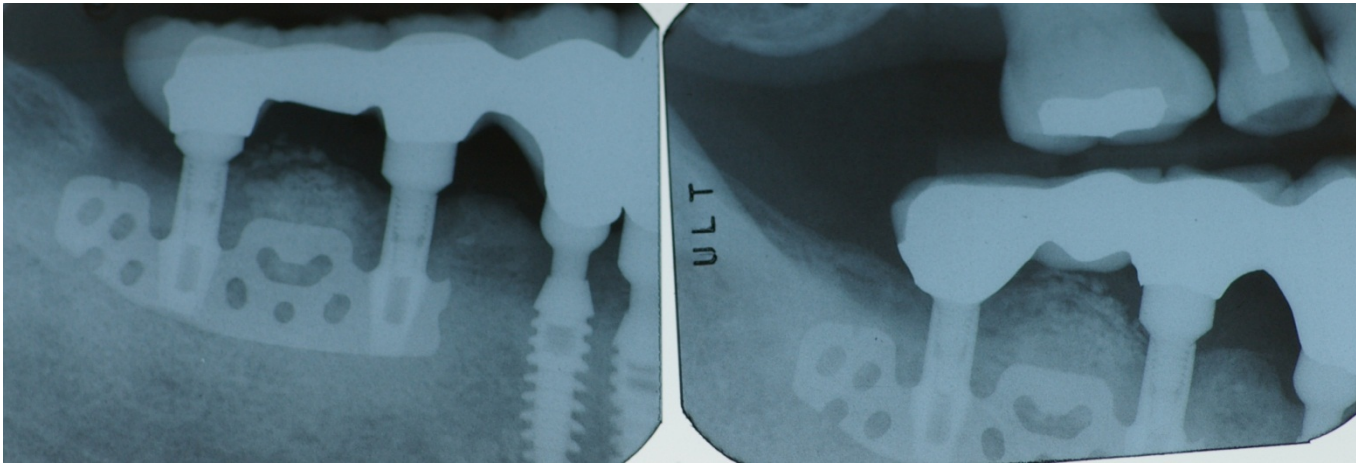
Post



{b6} received a Star 08 blade form (two post) from Parc Dental Research and two Bicon Root Form implants in the right posterior mandible. {b6} was restored with a 5 unit porcelain fused to semiprecious metal fixed partial denture. The implants were placed using a two stage protocol and osseointegrated. The right posterior mandible where the blade form implant was placed, is deficient in width.

This case has been in function for 16 years.

Case #7 {b6}

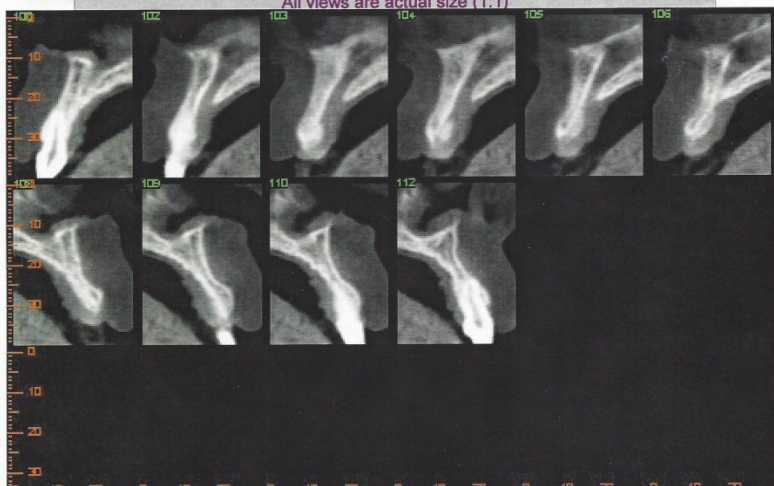
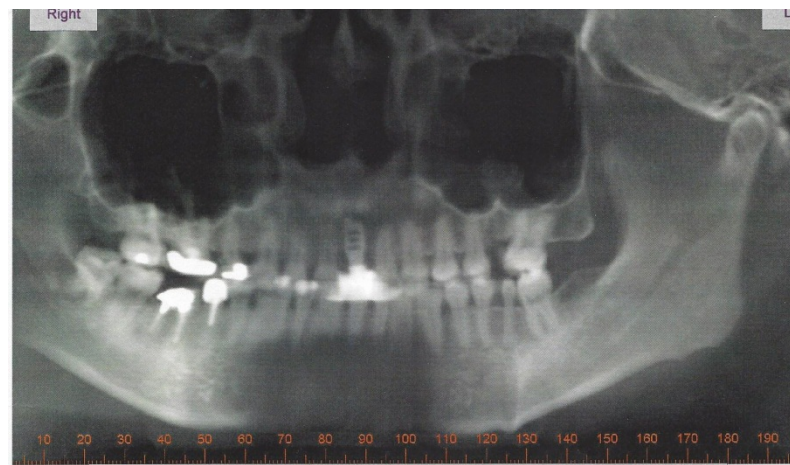
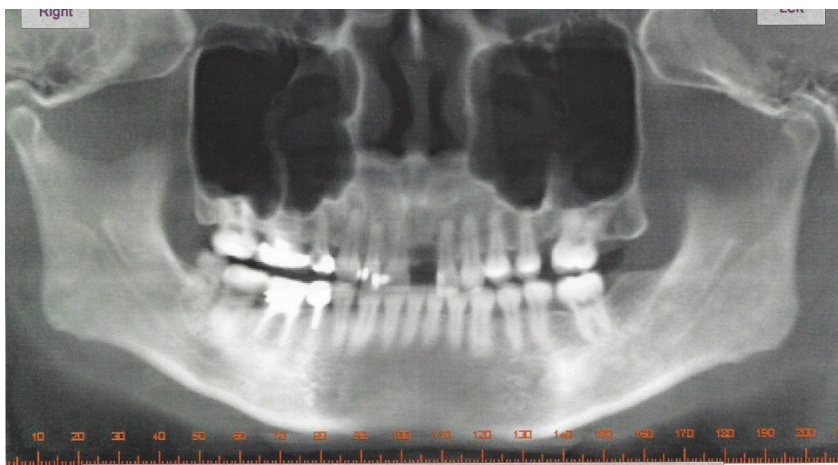


Note the bone remodeling/deposition between the abutment post.

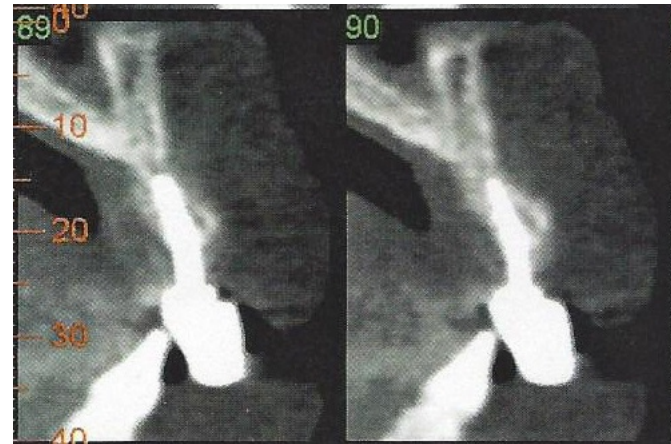
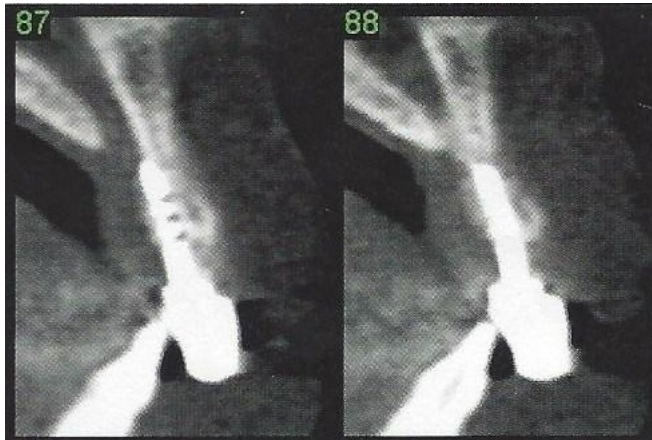
Case #8 {b6} CBCT

Pre

Post

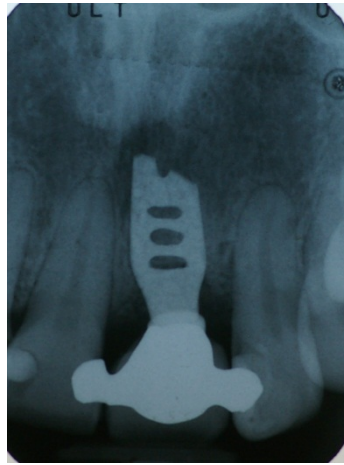


Case #8 {b6} Post Insertion CBCT



{b6}received an Ultimatics B-201 blade form dental implant at the site of #9. Notice the patients thin maxillary bone.

Case #8 {b6} Crown Delivery



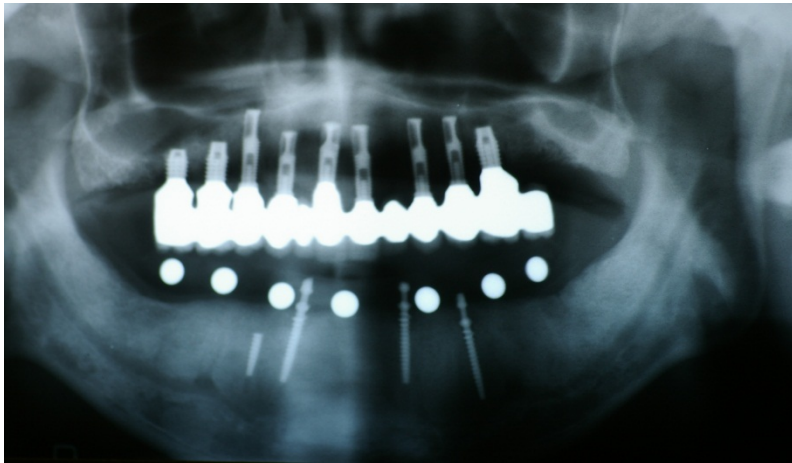
The implant was placed using a two stage protocol and osseointegrated. The site at # 9 is deficient in width. Bone grafting would result in more time and expense. {b6} was restored with a porcelain fused to semiprecious metal crown with lingual wings.

This case has been in service for 2 years.

Case #9 {b6}

Pre

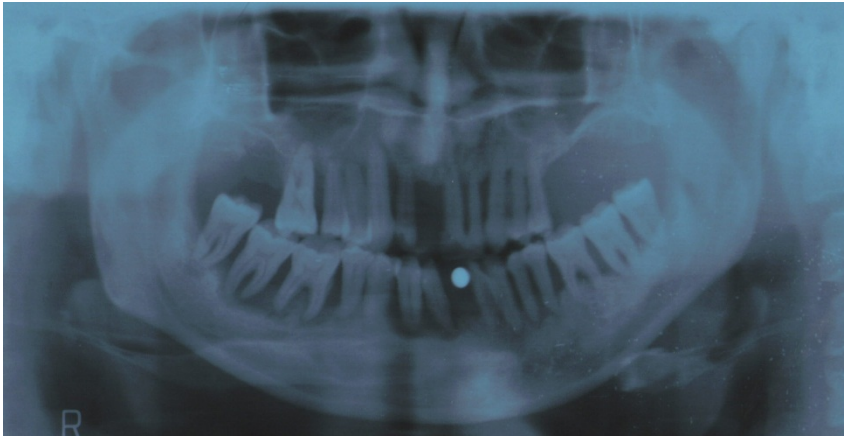
Post



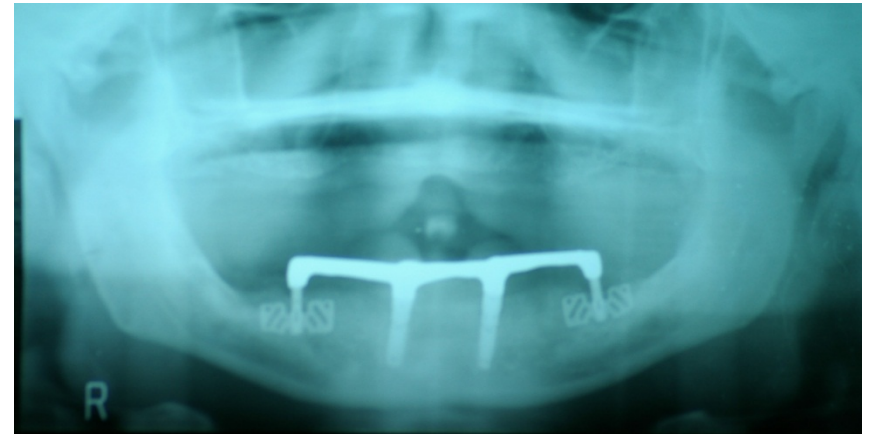
{b6} mandible was restored with a two posted anterior segment implant from Pacific Implant and two Ramus Blade implants from Pacific Implant. The final restoration is a cemented 12 unit porcelain fused to semiprecious metal fixed partial denture. Total treatment time was two and one half months. Total treatment time for the maxillary arch was 18 months. The mandibular implants were placed using a single stage protocol and did osseointegrate. The mandible is sufficient in height but not in width. This case has been in service for 7 years. Please note the retained fractured provisional mini implant. This mini implant was retained in lieu of the physical mutilation required for the removal of said implant. Bone grafting would result in more time and expense.

Case #10 {b6}

Pre



Post



{b6} presented with severe and hopeless periodontal disease. All the teeth were extracted, sites degranulated and alveoplasties performed and immediate dentures delivered. After 3 months of healing, the Star 01 blade implants from Parc Dental were placed in the right and left posterior mandible and two Steri-Oss THD root forms were placed in the anterior mandible. All implants were placed using a two stage protocol and did osseointegrate. The posterior mandible is sufficient in height but not in width. The mandible was restored with a bar retained overdenture.

This case has been in service for 17 years. Bone grafting would result in more time and expense.

Blade form dental implants do osseointegrate and provide a long period of successful service.

Blade form dental implants can safely and predictably be placed and efficiently restored by a properly trained doctor.

Blade form dental implants save the patient and doctor time and money.